acid moiety, said composition containing less than 100 parts per million total of volatile organic compounds, wherein said volatile organic compounds are selected from the group consisting of pentane, hexane, heptane, 2-butenal, ethanol, 3-methyl butanal, 4-methyl pentanone, hexanal, heptanal, 2-pental furan, octanol and combinations thereof.

REMARKS

Claims 1-5, 7-19, 24-35, 37-38 and 39 are currently pending and under examination. Claims 1-5, 7-19, 24-35, 37-38 and 39 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious under U.S. 5,760,082 to Cook et al., U.S. 6,159,525 to Lievense et al. in view of WO 97/18320 to Cain et al. Claims 10 - 19 and 24 - 34 are also rejected under the judicially created doctrine of obviousness-type double patenting. Applicants will submit a terminal disclaimer upon resolution of the §103(a) rejection. Claim 40 is newly added. Support for this claim may be found at page 26, lines 10-20 of the specification, among other places.

The Examiner maintains that claims 1-5, 7-19, 24-38 and 39 are obvious under the combination of U.S. 5,760,082 to Cook et al. and 6,159,525 to Lievense et al. in view of WO 97/18320 to Cain et al.

A *prima facie* case of obviousness requires the Examiner to provide a reference(s) which (a) discloses all of the elements of the claimed invention, (b) suggests or motivates one skilled in the art to combine the claimed elements to produce the claimed combination, and (c) provides a reasonable expectation of success should the claimed combination be carried out. Failure to establish any one of these three requirements precludes a finding of a *prima facie* case of obviousness and without more entitles the Applicants to allowance of the claims in issue.[1] In addressing this rejection, Applicants focus on the independent claims since the non-obviousness of independent claims necessarily leads to the non-obviousness of claims dependent thereon.[2]

Applicants respectfully submit that the references cited by the Examiner do not teach every element of the claims. The Examiner has admitted that "[t]he primary references do not teach expressly the employment of ascorbic acid or particularly point out the amount of VOC."

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1 *See, e.g., Northern Telecom Inc. v. Datapoint Corp.*, 15 USPQ2d 1321, 1323 (Fed. Cir. 1990).

2 §MPEP 2143.03.

(Office Action, *p.* 2). Applicants note that the references are silent with respect to the VOC content of their compositions. Thus, none of the references teach compositions (e.g., food products) with very low VOC content (i.e., less than 100 ppm) as are presently being claimed.

The failure of the references to teach the low VOC element has been repeatedly brought to the Examiner's attention in the Applicant's previous responses. However, the Examiner still has not provided any basis for the low VOC element in any of the cited references. Instead of providing actual evidence of low VOC content in the cited references, the Examiner repeats his reasoning from the previous Office Action:

> Regarding to the limitation about the amount of VOC, since the prior art teach that the food products containing CLA do not have any sensoric property caused by VOC, the amount of VOC is reasonably believed to be very low. The amount of VOC claimed herein is either within the scope of the prior art, or an obvious variation of the prior art, lacking the criticality to the final products. Office Action, page 3.

The Examiner then goes on to state that:

> To the contrary, one of ordinary skill in the art would have been motivated to employ food grade CLA in food product, and avoid any CLA composition containing smelly VOC. Applicant's assumption that CLA composition disclosed in the prior art inherently contains the VOC herein is without any factual support, and is improper. Office Action, p. 3-4.

Applicants respectfully submit that this line of argumentation is misguided, both factually and as a matter of law. Applicants first note that the Examiner admits at page three of the Office Action that "the instant invention claims a CLA composition, and a food product containing the same which is the same as those disclosed in the cited references in all, but one respects, i.e., the negative limitation of VOC." As described in Examples 12 and 13 (pages 57-58) of the specification, CLA does contain many volatile organic compounds. The specification then goes on to teach how to limit such compounds by improved processing methodologies. Thus, if as the

Examiner admits, the CLA of the present invention is the "same" as that of the prior art, then absent the improved processing methods described in the specification, the prior art CLA must have contained VOCs. Thus, contrary to the Examiner's statement in paragraph 3, the Applicants have provided factual evidence that the CLA of the prior art would have contained VOCs.

Next, Applicants note that the Examiner's conclusions regarding the Lievense et al. reference that were presented in the Office Action of January 8, 2003 also lack a sound basis. In that Office Action, the Examiner stated that "Lievense et al. teaches a food products comprising CLA compounds which has sensoric properties as good as corresponding food product without CLA." The Examiner then went on to state that "Lievense teaches CLA and food product containing the same. If the CLA composition containing VOC and smelly, it can not be used in the food product." Thus, it appears that the Examiner is relying on Lievense to provide the teaching of a CLA product with a low VOC content.

In contrast to the Examiner's interpretation, Lievense describes a "spread [having] sensoric properties as good as corresponding spreads without CLA . . .". (See, Lievense, abstract). However, it appears that Lievense is referring to the taste properties associated with the removal of various lipids, **not VOCs**. (See, Lievense, col. 2, lines 7-21). Lievense appears to be referring to the less likeable taste of low fat products. In column 3, at lines 9-37, Lievense describes the detrimental effect phospholipid incorporation can have on the mouthfeel, melting behavior and flavor release of the product. Thus, any reference to sensoric properties in Lievense is directed to taste and "mouth feel" as opposed to olfactory effects of VOC's. In particular, VOC's are not mentioned in Lievense and Lievense does not attribute a lack of sensoric properties to a lack of VOCs.

Additionally, it is respectfully submitted that the Examiner's reasoning regarding "smelly VOCs" has no scientific basis. While it is true that many VOCs have some smell associated with them, many do not. In particular, VOCs such as pentanal, hexanal, pentane and hexane, do not have significant taste or smell. Thus, the fact that CLA compositions of the prior art were used for oral administration bears no relevance to whether those compositions contained VOCs. Thus, the Examiner's reasoning in Paragraph 3 is without factual support because the VOC level cannot be "reasonably believed to be very low."

Furthermore, applicants note that each of the three references cited by the Examiner

actually utilize a volatile organic compound, hexane, as part of the CLA production process. This fact is in direct contrast to the Examiner's statement in paragraph 5 of the Office Action that VOCs are accumulated in the CLA composition only due to composition. Contrary to the Examiner's finding, VOCs can certainly be added to CLA compositions during processing. In particular, each of the references teaches the use of hexane to extract CLA from the solvent used in the catalysis reaction. See Lievense et al., column 5, lines 40-45; Cook et al., column 2, lines 30-50; 97/18320, p. 11, lines 10-15. While the references do teach the use of rotary evaporation to remove at least part of the hexane, there is no evidence that it is removed to the specified levels. Thus, even "freshly made" CLA can have significant amounts of added VOCs. In this respect, Applicants direct the Examiner to new claim 40, which specifies a CLA composition containing at least 80% of a CLA moiety and which has less than 100 ppm VOCs. Applicants note that none of the compositions of the prior art meet these limitations because during synthesis the compositions comprised substantial amounts of solvent (e.g., propylene glycol) which was subsequently extracted with hexane. Thus, solvents and/or VOCs were **always** present during processing and a compositions comprising at least 80% of a moiety of CLA and less than 100 ppm VOC were **never** present.

CONCLUSION

All grounds of rejection and objection of the Office Action of June 25, 2003 having been addressed, reconsideration of the application is respectfully requested. It is respectfully submitted that the invention as claimed fully meets all requirements for patentability and that the claims are worthy of allowance. Should the Examiner believe that a telephone interview would aid in the prosecution of this application, Applicants encourage the Examiner to call the undersigned collect at (608) 218-6900.

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